

REMARKS

In response to the Office Action dated October 27, 2008, Applicants respectfully request reconsideration based on the above claim amendments and the following remarks. Applicants respectfully submit that the claims as presented are in condition for allowance.

Claims 9-12, 17-23 and 26-29 are pending in the present Application. Claims 9, 18, 19 and 23 are amended to better set forth the invention, and Claim 30 is added, leaving Claims 9-12, 17-23 and 26-30 for consideration upon entry of the present amendments and following remarks.

Support for the claim amendments can at least be found in the specification, the figures, and the claims as originally filed. Particularly, support for amended Claim 9 is at least found in originally filed Figures 3A and 3B, and in the specification at page 10, line 21 to page 11, line 10, and page 11, lines 20-23.

Support for amended Claim 18 is at least found in originally filed Figure 2, and in the specification at page 8, lines 8-21.

Support for amended Claim 23 and new Claim 30 is at least found in originally filed Figure 1.

No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

****PTO-892 form and Brogårdh, U.S. Patent No. 4,475,240**

Applicants respectfully note that U.S. Patent No. 4,475,240 to Brogårdh et al., still has not been indicated as formally considered on any PTO-892 form attached to any previous Office action, nor the instant Office action of October 27, 2008. Brogårdh et al. has also not been submitted by Applicants in any PTO-1449 form.

Applicants again respectfully request indication of formal consideration on a PTO-892 form to be provided for the instant application.

Claim Objections

Claim 18 is objected to because in line 11 of Claim 18, “the external lights” lacks antecedent basis in the claim. Applicants hereinabove amend Claim 18 to replace “the external lights” with “external lights.” Entry of the claim amendment, reconsideration and withdrawal of the relevant claim objection are respectfully requested.

Claim Rejections Under 35 U.S.C. § 112

Claims 18-22 are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s) had possession of the claimed invention. Particularly, “one portion of the light guide *being a protrusion upwardly protruding* from the sidewall of the case” is cited as allegedly having no support in the figures or claims.

Applicants hereinabove amend Claim 18 to replace the above limitation with “one portion of the light guide *exposed through* the sidewall of the case.” Support for the relevant amendment to Claim 18 is at least found in originally filed Figure 2 and in the specification at page 8, lines 13-21.

Therefore, Applicants respectfully submit that amended Claim 18, and Claims 19-22 as depending upon Claim 18, is supported in the figures, contains subject matter which was described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s) had possession of the claimed invention, and complies with the written description requirement of 35 U.S.C. §112, first paragraph. Entry of the claim amendment, reconsideration and withdrawal of the relevant §112, first paragraph claim rejection are respectfully requested.

Claims 9-12 and 17 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Particularly, it is alleged that Claim 9 recites the “lower

reflecting plate” both “separated from the upper transparent plate” and “contacting the upper transport plate.” Applicants respectfully disagree.

Claim 9 as previously amended recites,

*“a lower reflecting plate attached to a bottom of the optical wave guide for upwardly reflecting light introduced into the optical wave guide;
an upper transparent plate...having an opening therein for exposing the optical waveguide, and a surface of an entrance of the opening being parallel to a surface of the lower reflecting plate in direct contact with the optical wave guide; and
a light concentrating plate...separated from the upper transparent plate, wherein the light concentrating plate is disposed...contacting the upper transparent plate adjacent to the opening along a line.”*

As recited in Claim 9, the “lower reflecting plate” is not separated and contacting the “upper transparent plate.” However, the “light concentrating plate” is noted as being recited “separated from the upper transparent plate” and “contacting the upper transparent plate.” For purpose of this response, it will be assumed that the rejection details intended to indicate the “light concentrating plate.”

Applicants hereinabove amend Claim 9 to remove the above limitation of the “light concentrating plate” being “separated from the “upper transparent plate.”

Therefore, Applicants respectfully submit that amended Claim 9, and Claims 10-12 and 17 as depending upon Claim 9, is definite for particularly pointing out and distinctly claiming the subject matter which applicant regards as the invention, and complies with 35 U.S.C. §112, second paragraph. Entry of the claim amendment, reconsideration and withdrawal of the relevant §112, second paragraph claim rejection are respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 9-12 and 17

Claims 9, 10 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,736,686 to Perret (hereinafter “Perret”) in view of U.S. Patent No. 6,369,866,234 to Rai et al. (hereinafter “Rai”), and further in view of Funamoto et al., U.S. Patent No. 6,742,907 (hereinafter “Funamoto”).

Claims 11 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Perret, Rai and Funamoto, and further in view of U.S. Patent No. 4,521,772 to Lyon (hereinafter "Lyon"). Applicants respectfully traverse the rejections for the reasons set forth below.

Amended independent Claim 9 recites, *inter alia*:

"an upper transparent plate attached to a top of the optical wave guide for passing the light reflected from the lower reflecting plate, *the upper transparent plate having an extension portion protruding from an edge of the lower reflecting plate, an opening in the extension portion for exposing the optical waveguide*, and a surface of an entrance of the opening being parallel to a surface of the lower reflecting plate in direct contact with the optical wave guide; and

a light concentrating plate attached to the edge of the lower reflecting plate, disposed on another portion of the sides of the optical wave guide and under the opening of the upper transparent plate, extending diagonally and upwardly from the lower reflecting plate to the upper transparent plate, contacting the lower reflecting plate and the upper transparent plate, contacting external light passing through the opening of the upper transparent plate, and reflecting the external light into the optical wave guide,

wherein the optical wave guide is a space disposed between the lower reflecting plate, the light concentrating plate, the side reflecting plates and the upper transparent plate, and

wherein a portion of the external light is reflected from the lower reflecting plate and passes through the upper transparent plate at substantially a same time.

Firstly, in the instant Office action at Pages 5 and 6, Figure 1 and Col. 1, lines 14-19 of Perret are cited as teaching the claimed invention. Particularly, light guide 14, reflective structure 15, top surface 49/diffuser 56 and tape 47, in Figure 1 of Perret are respectively considered as teaching the "optical waveguide," the "lower reflecting plate," the "upper transparent plate," and the "light concentrating plate" of Claim 9.

The top surface 49 or the diffuser 56 of Perret (as the "upper transparent plate") does not include an extension portion and an opening in the extension portion for exposing the light guide 14, where an entrance surface of the opening is parallel to a surface of the reflective structure 15. Therefore, Perret *does not teach or suggest* the upper transparent plate having an extension portion protruding from an edge of the lower reflecting plate, an opening in the extension portion for exposing the optical waveguide, and a surface of an entrance of the opening being parallel to a surface of the lower reflecting plate in direct contact with the optical wave guide of amended Claim 9.

In the instant Office action at Page 6, Figure 6 of Rai is cited as teaching elements of the claimed invention. Particularly, light guide plate 20, reflecting portion 40, display panel 10 and

reflecting portion 44 in Figure 6 of Rai are respectively considered as teaching the “optical waveguide,” the “lower reflecting plate,” the “upper transparent plate,” and the “light concentrating plate” of Claim 9.

The display panel 10 of Rai does not include an extension portion and an opening in the extension portion for exposing the light guide plate 20, where an entrance surface of the opening is parallel to a surface of the reflecting portion 40. Therefore, Rai *does not teach or suggest* the upper transparent plate having an extension portion protruding from an edge of the lower reflecting plate, an opening in the extension portion for exposing the optical waveguide, and a surface of an entrance of the opening being parallel to a surface of the lower reflecting plate in direct contact with the optical wave guide of amended Claim 9, and does not remedy the deficiencies of Perret.

In the instant Office action at Page 7, Figure 52a of Funamoto is cited as teaching elements of the claimed invention. Particularly, light guide plate 11, convex shapes 11A, illuminated object 6 and inclined face 16 (misnumbered as “6” in Figure 52a, see Col. 24, lines 45-49) of Funamoto are respectively considered as teaching the “optical waveguide,” the “lower reflecting plate,” the “upper transparent plate,” and the “light concentrating plate” of Claim 9. Applicants respectfully disagree.

Funamoto teaches the illuminated object 6 of Funamoto merely receives light from light source 2 that passes through the light guide plate 11. There is no teaching or suggestion in Funamoto, nor is there any further explanation in the rejection details as to how the illuminated object 6 in Figure 52a of Funamoto teaches the “upper transparent plate” of Claim 9. Therefore, Funamoto also *does not teach or suggest* the upper transparent plate having an extension portion protruding from an edge of the lower reflecting plate, an opening in the extension portion for exposing the optical waveguide, and a surface of an entrance of the opening being parallel to a surface of the lower reflecting plate in direct contact with the optical wave guide of amended Claim 9, and does not remedy the deficiencies of Perret and Rai.

Notwithstanding that the illuminated object 6 in Figure 52a of Funamoto does not teach or suggest the “upper transparent plate” of Claim 9, the rejection details contend that the left side of the illuminated object 6, where there is no material or portion of the illuminated object 6, teaches the “opening” of the claimed invention. However, since the left side of the illuminated object 6 includes no material or portion of the illuminated object 6, and in fact, is *absent any*

material or portion of the illuminate object 6, Funamoto necessarily does not teach an “extension” of the illuminated object 6 including the “opening” in the extension portion. Therefore, Funamoto further *does not teach or suggest* the upper transparent plate having an extension portion protruding from an edge of the lower reflecting plate, an opening in the extension portion for exposing the optical waveguide, and a surface of an entrance of the opening being parallel to a surface of the lower reflecting plate in direct contact with the optical wave guide of amended Claim 9, and does not remedy the deficiencies of Perret and Rai.

Secondly, on page 6 of the instant Office action, Perret and Rai are conceded as not teaching an opening in the upper transparent plate, as recited in Claim 9. Additionally, since neither Perret, Rai nor Funamoto teach the “opening of the extension portion” of the claimed invention, the tape 47 of Perret, the reflecting portion 44 of Rai and the inclined face 16 of Funamoto (as the “light concentrating plate”) necessarily *do not teach or suggest* a light concentrating plate attached to the edge of the lower reflecting plate, disposed under the opening of the upper transparent plate, extending diagonally and upwardly from the lower reflecting plate to the upper transparent plate, contacting the lower reflecting plate and the upper transparent plate of amended Claim 9.

Thirdly, on page 6 of the instant Office action, Perret and Rai are conceded as not teaching the light concentrating plate extends diagonally and upwardly as recited in Claim 9. Necessarily then, Perret and Rai *do not teach or suggest* a light concentrating plate attached to the edge of the lower reflecting plate, disposed under the opening of the upper transparent plate, extending diagonally and upwardly from the lower reflecting plate to the upper transparent plate, contacting the lower reflecting plate and the upper transparent plate of amended Claim 9.

Notwithstanding that the illuminated object 6 in Figure 52a of Funamoto does not teach or suggest the “upper transparent plate” of Claim 9, as clearly shown in Figure 52A of Funamoto, the inclined face 16 does not contact the illuminated object 6. Therefore, Funamoto also *do not teach or suggest* a light concentrating plate attached to the edge of the lower reflecting plate, disposed under the opening of the upper transparent plate, extending diagonally and upwardly from the lower reflecting plate to the upper transparent plate, contacting the

lower reflecting plate and the upper transparent plate of amended Claim 9, and does not remedy the deficiencies of Perret and Rai.

Fourthly, the light guide 14 of Perret, the light guide plate 20 of Rai, and the light guide plate 11 of Funamoto are taught as being a solid and individual member, and cannot be considered as disclosing a “space” between features alleged as teaching the lower reflecting plate, the light concentrating plate, the side reflecting plates and the upper transparent plate, of Claim 9. Therefore, Perret, Rai and Funamoto also *do not teach or suggest* **the optical wave guide is a space disposed between the lower reflecting plate, the light concentrating plate, the side reflecting plates and the upper transparent plate** of amended Claim 9.

Finally, Lyon is relied upon as teaching the optical pointing device of Claims 11 and 12. Applicants respectfully submit that Lyon also *does not teach or suggest* **the upper transparent plate having an extension portion protruding from an edge of the lower reflecting plate, an opening in the extension portion for exposing the optical waveguide, and a surface of an entrance of the opening being parallel to a surface of the lower reflecting plate in direct contact with the optical wave guide and a light concentrating plate attached to the edge of the lower reflecting plate, disposed under the opening of the upper transparent plate, extending diagonally and upwardly from the lower reflecting plate to the upper transparent plate, contacting the lower reflecting plate and the upper transparent plate** of amended Claim 9, and does not remedy the deficiencies of Perret, Rai and Funamoto.

Thus, Perret, Rai, Funamoto and Lyon, alone or in combination, *fail to teach or suggest all of the limitations* of amended Claim 9. Accordingly, *prima facie* obviousness does not exist regarding at least amended Claim 9 with respect to Perret, Rai and Lyon. Applicants respectfully submit that Claim 9 is not further rejected or objected and is therefore allowable. As Claims 10-12 and 17 variously depend from Claim 9, they are correspondingly allowable. Entry of the claim amendments, reconsideration, withdrawal of the relevant §103 rejections, and allowance of Claims 9-12 and 17 are respectfully requested.

Claims 18-22

Claims 18, 21 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,618,038 to Bohn (hereinafter “Bohn”) in view of U.S. Patent No. 6,741,234 to Son (hereinafter “Son”).

Claims 19 and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bohn in view of Son and further in view of U.S. Patent No. 6,111,563 to Hines (hereinafter “Hines”). Applicants respectfully traverse the rejections for the reasons set forth below.

Amended independent **Claim 18** recites, *inter alia*:

“a light guide disposed at a sidewall of the case, *one portion of the light guide exposed through the sidewall of the case to contact an external environment outside the case, an other portion of the light guide extending from the sidewall of the case to an interior of the case* by a predetermined length to contact an internal environment inside the case,

the light guide having a taper shape for acting as a light amplifying means, diameters of the one portion and the other portion being different in size from each other, directly accepting external lights through the one portion of the light guide to obliquely irradiate lights penetrating the light guide onto a surface of the worktable through an opening formed in a lower panel of the case.”

Firstly, in the instant Office action at Pages 9 and 10, Figures 1 and 7 and Col. 4, lines 59-60 of Bohn are cited as teaching the claimed invention. Particularly, housing 504 and lens 108/109 in Figure 7 of Bohn are respectively considered as teaching the “case” and the “light guide” of Claim 18.

The lens 108 of Bohn (as the “light guide”) is not “exposed through” a sidewall of the housing 504. Therefore, Bohn *does not teach or suggest* a light guide disposed at a sidewall of the case, one portion of the light guide exposed through the sidewall of the case to contact an external environment outside the case, an other portion of the light guide extending from the sidewall of the case to an interior of the case by a predetermined length to contact an internal environment inside the case of amended Claim 18.

Secondly, as clearly shown in Figures 1 and 7 of Bohn, the lens 108/109 does not have a “taper shape” as claimed. Therefore, Bohn also *does not teach or suggest* the light guide having a taper shape for acting as a light amplifying means, diameters of the one portion and the other portion being different in size from each other, directly accepting external lights through the one

portion of the light guide to obliquely irradiate lights penetrating the light guide onto a surface of the worktable through an opening formed in a lower panel of the case of amended Claim 18.

Thirdly, since Bohn is conceded as not teaching the “circuit board” of the claimed invention at Page 10 of the instant Office action, Son is relied upon as teaching the printed circuit board of Claims 18 and 22. Hines is relied upon as teaching the light concentrating surface and the illuminating surface of Claims 19 and 20. Applicants respectfully submit that Son (for example, Figures 3 and 7), and Hines (for example, Figures 2-6, 10, 11) also *does not teach or suggest* a light guide disposed at a sidewall of the case, one portion of the light guide exposed through the sidewall of the case to contact an external environment outside the case, an other portion of the light guide extending from the sidewall of the case to an interior of the case by a predetermined length to contact an internal environment inside the case and the light guide having a taper shape for acting as a light amplifying means, diameters of the one portion and the other portion being different in size from each other, directly accepting external lights through the one portion of the light guide to obliquely irradiate lights penetrating the light guide onto a surface of the worktable through an opening formed in a lower panel of the case of amended Claim 18, and do not remedy the deficiencies of Bohn.

Thus, Bohn, Son and Hines, alone or in combination, *fail to teach or suggest all of the limitations* of amended Claim 18. Accordingly, *prima facie* obviousness does not exist regarding amended Claim 18 with respect to Bohn, Son and Hines. Applicants respectfully submit that Claim 18 is not further rejected or objected and is therefore allowable. As Claims 19-22 variously depend from Claim 18, they are correspondingly allowable. Entry of the claim amendments, reconsideration, withdrawal of the relevant §103 rejections, and allowance of Claims 19-22 are respectfully requested.

Claims 23 and 26-29

Claims 23 and 26-29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,475,240 to Brogårdh et al. ^{*(please see note above, again regarding PTO-892)} (hereinafter “Brogårdh”) in view of U.S. Patent No. 6,377,249 to Mumford (hereinafter “Mumford”). Applicants respectfully traverse the rejections for the reasons set forth below.

Amended Claim 23 recites, *inter alia*:

“a light guide disposed on a sidewall of the case, and including first and second surfaces respectively on predetermined portions of the light guide.”

In the instant Office action at Pages 12 and 13, Figures 4a and 9 of Brogårdh are cited as teaching the claimed invention. Particularly, marking device/pen 33 in Figure 4a and fiber 36/121 in Figure 9 of Brogårdh are respectively considered as teaching the “case” and the “light guide” of Claim 23.

Brogårdh teaches a marking device 33 having a writing point 34 (Figures 4a and 4b) surrounded by fibers 36-38, and light is reflected back from material 3 into fibers 35-38, passed to branches 124-127 and forwarded to fibers 120-123. (See, Col. 7, lines 1-16 and Figure 9.) A bottom of fiber 36 and a top of fiber 121 are respectively considered as the “first surface” and the “second surface” of Claim 23.

As clearly shown in Figures 4a, 4b and 9, the fiber 36/121 is not disposed “on” the pen 33 as recited in amended Claim 23, and the fiber 36/121 is not disposed “directly on and contacting” the pen 33 as recited in new Claim 30. Therefore, Brogårdh *does not teach or suggest* a light guide disposed on a sidewall of the case, and including first and second surfaces respectively on predetermined portions of the light guide of amended Claim 23, and the light guide is disposed directly on and contacting the sidewall of the case of new Claim 30.

Mumford is relied upon as teaching the protrusion of the light guide. Applicants respectfully submit that the “protrusion” of the light guide has been deleted from Claim 23, and that Mumford also *does not teach or suggest* a light guide disposed on a sidewall of the case, and including first and second surfaces respectively on predetermined portions of the light guide of amended Claim 23, and the light guide is disposed directly on and contacting the sidewall of the case of new Claim 30, and does not remedy the deficiencies of Brogårdh.

Thus, Brogårdh and Mumford, alone or in combination, *fail to teach or suggest all of the limitations* of amended Claim 23 and new Claim 30. Accordingly, *prima facie* obviousness does not exist regarding amended Claim 23 with respect to Brogårdh and Mumford, and new Claim 30 is distinguished over Brogårdh and Mumford. Applicants respectfully submit that Claim 23 is not further rejected or objected and is therefore allowable. As Claims 26-29 variously depend from Claim 23, they are correspondingly allowable. Entry of the claim amendments,

reconsideration, withdrawal of the relevant §103 rejections, and allowance of Claims 23 and 26-30 are respectfully requested.

Conclusion

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

Applicants hereby petition for any necessary extension of time required under 37 C.F.R. 1.136(a) or 1.136(b) which may be required for entry and consideration of the present Reply.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

Respectfully submitted,

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